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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,432	04/21/2006	Masaru Hidaka	271013US90PCT	6068

22850 7590 04/03/2009

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EXAMINER	
GALE, KELLETTE	

ART UNIT	PAPER NUMBER
1621	

NOTIFICATION DATE	DELIVERY MODE
04/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/533,432	HIDAKA ET AL.	
	Examiner	Art Unit	
	KELLETTE GALE	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 17-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 17-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-3 and 17-24 are pending in this application.

Claims 4-16 have been cancelled.

Claims 1-3 and 17-24 are rejected in this office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The phrase "organic acid calcium salt" is not found in the specification. Although there is mention of organic acid and salt, there is no specificity of calcium being present. Proper correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitoshi et al.

Applicant claims a process for decomposing a polymer into monomer or oligomer comprising hydrolyzing the polymer with sub or super critical water in the presence of a water insoluble base, the water insoluble base specifically being CaCO3.

Determination of the scope and content of the prior art

(MPEP §2141.01)

The difference between the prior art and the claims is that Hitoshi et al does not specifically use CaCO3 as its inorganic oxide.

Finding of prima facie obviousness

Rational and Motivation (MPEP §2142-2143)

One having ordinary skill in the art at the time of the instant invention would find it obvious to utilize CaCO3 as an inorganic oxide as it is stated in the disclosure of Hitoshi et al that any inorganic oxide may be used. One having ordinary skill in the art at the time of the instant invention would be motivated to use CaCO3 as its inorganic oxide with a reasonable expectation of success based on cost and availability of products.

Please see paragraph 0004 where it lists that hydrocarbon gas is collected as a product of the reaction.

Response to Arguments

Applicant's arguments filed December 17, 2008 have been fully considered but they are not persuasive. Applicants have argued that the water insoluble bases used in the instant invention are very effective in accelerating or improving efficiency of hydrolysis of the polymer by inhibiting the side reaction caused by the organic acid and the self decomposition of the organic acid. Applicants say that in the case of the prior art, the water insoluble bases are used for capturing halogens and not in hydrolyzing the polymer. Applicant also argues that an organic acid and alcohol can be produced and recovered in high yield by hydrolyzing the polymer. Applicant goes on to argue that according to the prior art, one may recognize that the efficiency of hydrolysis can be accelerated or improved by the use of water-soluble bases such as NaOH and KOH, but not the use of water-insoluble bases such as CaCO3 and/or BaCO3.

Applicants have stated that claim 19 is distinguishable over the prior art but fails to explain why. Explanation is needed.

The Examiner contends that although the water insoluble bases of the prior art may in fact be capturing halogens that is not the only thing they are doing. It is recognized by the Examiner that Hitoshi et al is also hydrolyzing or decomposing the polymer. The polymer is indeed being hydrolyzed since Hitoshi et al recovers monomers and/or oligomers. Also, if all of the elements are present then the invention has been realized. If applicant feels that the instant invention has some sort of

advantage over the prior art lying in the yield that is gained, the Examiner encourages applicant to enter a side by side comparison on the record of the prior art and the instant invention that shows such an advantage.

The Examiner further contends that if the prior art has recited against the use of water insoluble bases then applicant must point the Examiner to where this has been disclosed. Also, organic acids or usually soluble and the prior art recites the use of organic acids. Therefore, this argument is seen as not being true.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLETTE GALE whose telephone number is (571)272-8038. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DANIEL SULLIVAN can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kellette Gale
Patent Examiner
Technology Center 1600

March 25, 2009

/Daniel M Sullivan/
Supervisory Patent Examiner, Art Unit 1621